UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/495,447	01/31/2000	Satoru Niwa	1832/40	4868

23838 7590 04/22/2003

KENYON & KENYON
1500 K STREET, N.W., SUITE 700
WASHINGTON, DC 20005

EXAMINER
BURCH, MELODY M

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)
	09/495,447	NIWA, SATORU
	Examiner	Art Unit
	Melody M. Burch	3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-29 and 32-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *20 and 37* is/are allowed.

6)☒ Claim(s) *3,5,13-18,24,34,39-41 and 44-47* is/are rejected.

7)☒ Claim(s) *2,4,6-12,19, 21-23,25-29,32,33,35, 36, 38,42 and 43* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 January 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of the rotor, wheel, friction member, and actuator as claimed for example in the last three lines of claim 40 but also recited in other claims and presence of at least four electric power sources as suggested by claim 17 must be shown and clearly labeled or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to the Examiner whether the two electric power sources claimed in claim 17 are intended to be the same or different from the plurality of electric power sources claimed in claim 16. It is noted that at least four electric power sources are not shown.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4655634 to Loy et al. Loy et al. disclose in figure 4 an electrically controlled braking system including an electrically controlled brake 68, an electric power source device 82, a brake operating member or door 30 or 36 to which switches 42,44 are connected, and a brake control apparatus 80,120 for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when the brake operating member is operated, the braking system comprising: a switching device 42,44 disposed between the electric power source device and at least one of the brake control apparatus and the brake, the switching device being turned on for connecting the electric power source device to the at least one of the brake control apparatus and the brake, in response to an operation of the brake operating member, wherein the switching device includes a plurality of switches which are connected in series with each other and which are turned on in response to the operation of the brake

operating member (i.e. the operation of door 30 or 36 as disclosed in col. 5 lines 9-12) that is common to the plurality of switches.

6. Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by WIPO 98/12090 (using US Patent 6227626 to Blattert as an English equivalent).

Re: claim 13. Blattert shows in the figure an electrically controlled braking system including an electrically controlled brake 172,173, an electric power source device 100,101, a brake operating member 130, and a brake control apparatus 162,163 for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when the brake operating member is operated, the braking system comprising: a switching device 120 disposed between the electric power source device and at least one of the brake control apparatus and the brake, the switching device being turned on for connecting the electric power source device to the at least one of the brake control apparatus and the brake, in response to an operation of the brake operating member, wherein the electrically controlled brake includes a front brake 173 and a rear brake 172, and the brake control apparatus includes a front brake control device 163 and a rear brake control device 162, the electric power source device includes a plurality of electric power sources which are arranged to supply electric energies to the front brake control device independently of each other as shown.

Re: claim 14. Blattert shows in the figure the rear brake including a first rear brake 172 and a second rear brake 170 and the rear brake control device including a first rear brake control device 162 and a second rear brake control device 160, the first

rear brake control device being connected to one of the plurality of power source devices while the second rear brake control device being connected to another one of the plurality of power source devices as shown.

7. Claim 15 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6203116 to Dieckmann. Dieckmann shows in the figure an electrically controlled braking system including an electrically controlled brake 16a,16b, an electric power source device 20,22a,22b, a brake operating member 4, and a brake control apparatus 14a,14b for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when the brake operating member is operated, the braking system comprising: a switching device 10 disposed between the electric power source device and at least one of the brake control apparatus and the brake, the switching device being turned on for connecting the electric power source device to the at least one of the brake control apparatus and the brake, in response to an operation of the brake operating member, wherein the electrically controlled brake includes a front left brake 16a bottom, a front right brake 16a top, a rear left brake 16b bottom, and a rear right brake 16b top, and the brake control apparatus includes a front left brake control device 14a bottom, a front right brake control device 14a top, a rear left brake control device 14b bottom, and a rear right brake control device 14b top, the electric power source device including a front left brake power source 22a and a front right brake power source 20 which are arranged to supply electric energies to the front left and right brake control devices, respectively,

independently of each other, and a common rear brake power source 22b arranged to supply an electric energy to both of the rear left and right brake control devices.

8. Claim 39 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 5532674 to Michaud. Michaud shows in figure 11 an electrically controlled braking system including an electrically controlled brake 57,58, an electric power source device 46, a brake operating member or pedal connected to switch 48A, and a brake control apparatus 65,65A,61,66 for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when the brake operating member is operated, the braking system comprising: a switching device 47,48A disposed between the electric power source device and the brake, wherein the switching device includes a first switch 47 and a second switch 48A which are connected in parallel with each other, the first switch comprising at least one of an ignition switch of the automotive vehicle, and a switch which is turned on and off in response to an operation of the ignition switch, the second switch being turned on and off in response to an operation of the brake operating member, the switching device being turned on for connecting the electric power source device to the brake, in response to either one of the operations of the ignition switch and the brake operating member.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 16, 17, and 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO 98/12090 (using US Patent 6227626 to Blattert as an English equivalent) in view of US Patent 5829845 to Maron et al.

Blattert shows in the figure an electrically controlled braking system including an electrically controlled brake 172,173, an electric power source device 100,101, a brake operating member 130, and a brake control apparatus 162,163 for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when the brake operating member is operated, the braking system comprising: a switching device 120 disposed between the electric power source device and at least one of the brake control apparatus and the brake, the switching device being turned on for connecting the electric power source device to the at least one of the brake control apparatus and the brake, in response to an operation of the brake operating member, wherein the electrically controlled brake includes front brake 173 wheel brake components and the electric power source device includes a plurality of electric power sources arranged to supply electric energies to a component of the front brake independently of each other, but does not include the details of the wheel brake components including a front rotor rotating with a front wheel, a front friction member, and a front brake actuator.

Maron et al. teach in figures 1 and 2a the use of an electrically actuated front brake shown in the area of element number 14a, the front brake including the following components shown in figure 2a: a front rotor 14 rotating with a front wheel 16a, a front

friction member 26, and a front brake actuator 20,22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the wheel brake components of Blattert to have included a rotor, wheel, friction member, and brake actuator as taught by Maron et al., in order to provide a disk brake, a well-known brake assembly used to apply a decelerating force to a wheel.

11. Claims 3, 18, 24, 40, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaud in view of US Patent 5829845 to Maron et al.

Michaud shows in figure 11 an electrically controlled braking system including an electrically controlled brake 57,58, an electric power source device 46, a brake operating member or pedal connected to switch 48A, and a brake control apparatus 65,65A,61,66 for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when the brake operating member is operated, the braking system comprising: a switching device 47,48A disposed between the electric power source device and the brake, wherein the switching device includes a first switch 47 and a second switch 48A which are connected in parallel with each other, the first switch comprising at least one of an ignition switch of the automotive vehicle, and a switch which is turned on and off in response to an operation of the ignition switch, the second switch being turned on and off in response to an operation of the brake operating member, the switching device being turned on for connecting the electric power source device to the brake, in response to either one of the operations of the ignition switch and the brake operating member and shows in figure 11 the use of a rotor 59 as one of the wheel brake

components, but does not include the details of the wheel brake components including a wheel, a friction member, and an actuator to force the friction member on to the rotor.

Maron et al. teach in figures 1 and 2a the use of an electrically actuated front brake shown in the area of element number 14a, the front brake including the following components shown in figure 2a: a front rotor 14 rotating with a front wheel 16a, a front friction member 26, and a front brake actuator 20,22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the wheel brake components of Michaud to have included a rotor, wheel, friction member, and brake actuator as taught by Maron et al., in order to provide a disk brake, a well-known brake assembly used to apply a decelerating force to a wheel connected to a rotor.

12. Claims 41, 46, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaud in view of WIPO 98/12090 (using US Patent 6227626 to Blattert as an English equivalent).

Michaud shows in figure 11 an electrically controlled braking system including an electrically controlled brake 57,58, an electric power source device 46, a brake operating member or pedal connected to switch 48A, and a brake control apparatus 65,65A,61,66 for controlling an electric energy to be supplied from the electric power source device to the brake, for thereby controlling an operation of the brake, when the brake operating member is operated, the braking system comprising: a switching device 47,48A disposed between the electric power source device and the brake, wherein the switching device includes a first switch 47 and a second switch 48A which are

connected in parallel with each other, the first switch comprising at least one of an ignition switch of the automotive vehicle, and a switch which is turned on and off in response to an operation of the ignition switch, the second switch being turned on and off in response to an operation of the brake operating member, the switching device being turned on for connecting the electric power source device to the brake, in response to either one of the operations of the ignition switch and the brake operating member, but does not disclose the limitation wherein the brake control apparatus determines a desired braking force to be produced by the brake on the basis of at least one of the operating stroke and the depression force detected by a detecting device and controlling the electric energy such that the desired braking force is produced by the brake.

Blattert teaches in the figure the limitation wherein a brake control apparatus 120 determines a desired braking force to be produced by a brake 173 on the basis of at least one of the operating stroke and the depression force detected by a detecting device 131 and controlling the electric energy from electric power source devices 100,101 such that the desired braking force is produced by the brake as taught in col. 5 lines 7-10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake control apparatus of Michaud to have included a means of producing desired brake control based on the output from a detecting device, as taught by Blattert, in order to provide a means of improving ride comfort for the driver or operator by more closely relating the actual braking with the braking desired by the driver.

Allowable Subject Matter

13. Claims 2, 4, 6-12, 19, 21-23, 25-29, 32, 33, 35, 36, 38, 42, and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claims 20 and 37 allowed.

Conclusion

15. In order to complete the record, it should be noted that no conflict appears to presently exist between the subject matter defined by the instant claims and the subject

matter of the claims of applicant's and/or assignee's US Patent 6476515 to Yamamoto et al. has been made of record. Accordingly, no double patenting rejection is entered into the instant application. See MPEP 804+ concerning double patenting type of rejections, if necessary. Applicant and/or assignee should maintain this clear line of patentable distinction between the instant claims and the claims of the indicated patent application.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents: 5418437 to Couture et al. and 5902019 to Maron et al. teach the use of brake control devices at each wheel brake, 6152545 to Mauser et al. teaches the use of a switching device between an electric power source and a brake control device, 4071284 to Masclet et al., 6317675 to Stolzl et al., 5961190 to Brandmeier et al., and 3792742 to Mager teach the use of a plurality of electric power sources, 3498426 to Nakano, 3645352 to Stark et al., 4679668 to Washizu et al., and 5302008 to Miyake et al. teach the use of brake control systems including an ignition switch arranged in the control circuit, 5466998 to Kinoshita et al. teaches the use of an electric system for a vehicle having switches arranged in parallel, 5519256 to Goodridge and 3651457 to Sprouse teach the use of brake control switches being arranged in series but not associated with a common brake operating member.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 4/15/03
mmb
April 15, 2003

4/17/2003

MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310